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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/065,195 | 09/25/2002 | Raj Kumar Jain | 2000P19187US | 8143 |

7590 08/31/2004

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EXAMINER

LE, THONG QUOC

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 08/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/065,195 | JAIN, RAJ KUMAR | |
| | Examiner | Art Unit | |
| | Thong Q. Le | 2818 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,11,12,14,15,20,21 and 23-31 is/are rejected.
- 7) ☒ Claim(s) 2,3,8-10,16-19,22 and 32-35 is/are objected to.
- 8) ☒ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Amendment filed on July 12, 2004 has been entered.
2. Claims 1-12, 14-35 are presented for examination.

Response to Amendment

3. Regarding amended claims, applicant is reminded that text is deleted must be shown by strikethrough. If the strikethrough is not easy to use, the text must be shown by double brackets [[]] for delete a character. Therefore, the correction of deleting for a comma (,) in claims 21-22, applicant must using format as described above. It is new rule. For example, [[,]]. Claim should be amended for proper format.

Some claims within status of "currently amended". However, examiner could not find where in claim is amended. The correction is required.

Response to Arguments

4. Applicant's arguments with respect to claims 1-12, 14-35 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1,4-7,11-12,14-15,20-21,23-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Uchida et al. (U.S. Patent No. 6,359,813).

Regarding claims 1, 12, 23 Uchida et al. disclose a memory device (Figure 15A-B) comprising:

a memory cell array (32) having a multitude of memory cells, first and second bitlines (Column 4, lines 40-51) , first and second wordlines, each of said memory cells being coupled to one of said first bitlines, one of said second bitlines, one of said first wordlines, and one of said second wordlines;

each of said memory cells being accessible through one of said first wordlines and one of first bitlines an external port (Figure 15A, 13) and being accessible through one of said second wordlines and one of said second bitlines by an internal port (Column 4, lines 53-63);

said external port being to input terminals to receive input signals in order to select one of said memory cells for an external data access (Column 4, lines 40-52);

a refresh control unit (Figure 1B, 121) generating refresh control signals to control refreshing of the memory cells through said internal port (Column 4, lines 53-62) ; and

a contention detection circuit (Column 4, lines 40-52), said contention detection circuit receiving a row address in response to an external read or write access through said external port and receiving a refresh address for a row of memory cells to be refreshed (Figure 1B, 121), said contention detection circuit suppressing a refresh, if said refresh address equals said row address (ABSTRACT, Column 2, lines 1-22).

Regarding claims 4-5, 6-7, 11, 14-15, 23-31, Uchida et al. disclose the external port (Figure 1A, 113) is connected to input terminals designed to receive one of an address signal (A0-An), a signal determining a read or write operation (Figure 1B, 121, READ, WRITE), a data clock signal (Figure 1A, CLK), and a device select signal (Figure 1B, 121), and a first bank of sense amplifier (134) and a column decoder (133).

Regarding claims 20-21, Uchida et al. disclose a memory device comprises a memory cell array (Figure 1B, 132), a first row decoder (Figure 1B, 121, row enable), a second row decoder (103), and refresh control circuit (123) to refresh the memory cells of a row which is activated by the second row decoder (Figure 1B).

Allowable Subject Matter

7. Claims 2-3, 8-10, 16-18, 19, 22, 32-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2-3, 8-10, 16-18, 19 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. Uchida et al. (U.S. Patent No. 6,359,), and others, does not teach the claimed invention having an arrangement of memory cell as claims 2-3, 19, 22 disclose, and a second clock terminal to receive a reference clock signal as claims 8-10, 16-18, 32-35 disclose.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Le whose telephone number is 571-272-1783. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thong Q. Le
Primary Examiner
Art Unit 2818

THONG Q. LE
PRIMARY EXAMINER